1. Median from any vertex of a triangle meets the opposite side at

   (a) any vertex (b) any point (c) mid–point (d) None of these

2. In a right angled triangle if one of the altitudes can be drawn on its hypotenuse, then the other two altitudes are

   (a) two legs of triangle (b) only on the base of triangle

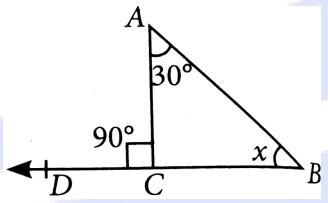
   (c) lie outside the triangle (d) None of these

3. If an exterior angle of a triangle is a right–angle, then the triangle is

   (a) an acute angled triangle (b) a right–angled triangle

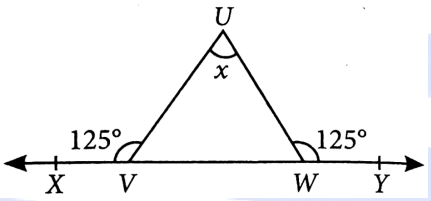
   (c) an obtuse–angled triangle (d) an equilateral triangle

4. The value of x in the given figure is



   (a) 45° (b) 60° (c) 90° (d) 120°

5. The value of x, in the adjoining figure is



   (a) 50° (b) 60° (c) 70° (d) 80°

6. A triangle can have

   (a) more than one right angle. (b) more than one obtuse angle.

   (c) more than one acute angle. (d) a right angle and an obtuse angle.

7. If three angles of a triangle measure $\frac{x}{2}, 3\frac{1}{2}x$ and 5 x, then the value of x is

   (a) 10° (b) 20° (c) 30° (d) 40°

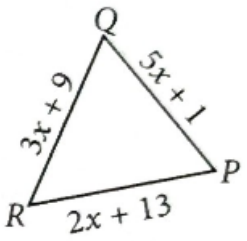
8. If one angle of a triangle is 70° and other two angles are in the ratio 7: 15, then find the greatest angle.

   (a) 70° (b) 75° (c) 80° (d) 90°

9. The angles of a triangle are in the ratio 1: 2: 3. The triangle is

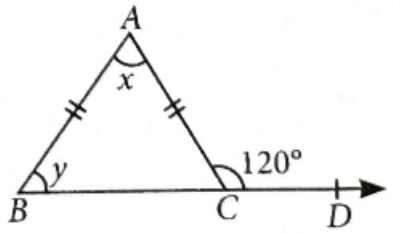
(a) isosceles (b) right angled (c) equilateral (d) None of these

10. If ΔPQR is an equilateral triangle, then find the perimeter of ΔPQR.



(a) 21 units (b) 42 units (c) 63 units (d) 84 units

11. Find the values of x and y respectively, if $AB = AC$.



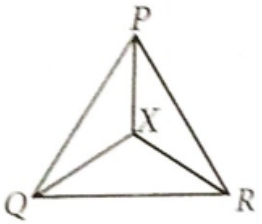
(a) $60^\circ, 60^\circ$ (b) $30^\circ, 30^\circ$ (c) $55^\circ, 55^\circ$ (d) $45^\circ, 45^\circ$

12. The difference of two sides of a triangle is

(a) always greater than third side (b) equal to third side

(c) always less than third side (d) None of these

13. x is a point in the interior of ΔPQR. Which of the following is true?



(a) $PX + XQ < PQ$ (b) $XQ + XR > QR$ (c) $PX + XR = PR$ (d) $PQ + PR < QR$

14. Which of the following can be the possible sides of a triangle?

(a) $5\text{cm}, 4\text{cm}, 9\text{cm}$ (b) $5\text{cm}, 4\text{cm}, 6\text{cm}$ (c) $3\text{cm}, 4\text{cm}, 9\text{cm}$ (d) $6\text{cm}, 6\text{cm}, 13\text{cm}$

15. If the length of a rectangle is 40cm and its diagonal is 41cm, then find the breadth of the rectangle.

(a) $7\,cm$ (b) $8\,cm$ (c) $9\,cm$ (d) $10\,cm$

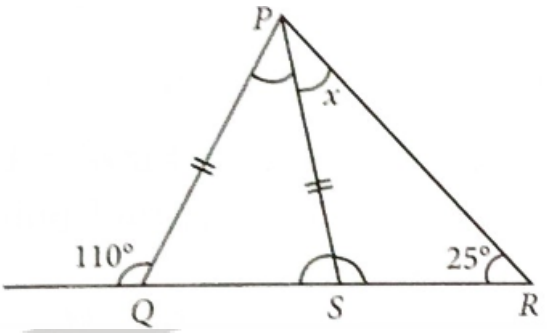
16. Raju walks $5km$ towards East and then $12km$ towards South. Find the distance between his starting and end point.

(a) $5km$ (b) $12km$ (c) $10km$ (d) $13km$

17. The lengths of the sides of triangles are given below: Which of them are not of a right–angled triangle?

(a) 8,15,17 (b) 7,24,25 (c) 5,12,13 (d) 3,3,5

18. In the given figure, $PQ = PS$. The value of x is



(a) 35° (b) 45° (c) 55° (d) 70°

19. In a right–angled triangle, the angles other than the right angle are

(a) obtuse (b) right (c) acute (d) straight

20. The top of a broken tree touches the ground at a distance of $12m$ from its base. If the tree is broken at a height of $5m$ from the ground, then the actual height of the tree is

(a) $25m$ (b) $13m$ (c) $18m$ (d) $17m$

21. The triangle A B C formed by $AB = 5cm$, $BC = 8cm, AC = 4cm$ is

(a) an isosceles triangle only (b) a scalene triangle only
(c) an isosceles right triangle (d) scalene as well as a right triangle

22. If two angles of a triangle are 60° each, then the triangle is

(a) Isosceles but not equilateral (b) Scalene
(c) Equilateral (d) Right–angled

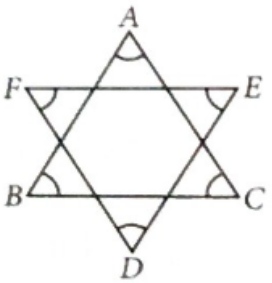
23. The perimeter of the rectangle whose length is $60cm$ and a diagonal is $61cm$ is

(a) $120cm$ (b) $122cm$ (c) $71cm$ (d) $142cm$

24. The length of two sides of a triangle are $7cm$ and $9cm$. The length of the third side may lie between

(a) $1cm$ and $10cm$ (b) $2cm$ and $8cm$ (c) $2cm$ and $16cm$ (d) $1cm$ and $16cm$

25. In the given figure, the value of $\angle A + \angle B + \angle C + \angle D + \angle E + \angle F$ is



(a) 190° (b) 540° (c) 360° (d) 180°

26. If one angle of a triangle is equal to the sum of the other two angles, the triangle is

(a) obtuse (b) acute (c) right (d) equilateral

27. Which of the following triplets cannot be the angles of a triangle?

(a) $67^\circ, 51^\circ, 62^\circ$ (b) $70^\circ, 83^\circ, 27^\circ$ (c) $90^\circ, 70^\circ, 20^\circ$ (d) $40^\circ, 132^\circ, 18^\circ$

28. Assertion: In the adjacent figure, the value of $p+q$ is 140°.

Reason : At any vertex of a triangle, exterior angle + interior angle $= 180^\circ$

(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

(c) If Assertion is true but Reason is false.

(d) If Assertion is false but reason is true.

29. Assertion: In a $\triangle ABC$, if $\angle A = x, \angle B = 2\angle A$, $\angle C = 3\angle B$, then the smallest of the angles will be 20°.

Reason : Sum of the interior angles of a triangle is two right angles.

(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

(c) If Assertion is true but Reason is false.

(d) If Assertion is false but reason is true.

30. Assertion : When the length of sides of the equilateral triangle are increased by same percentage, then angles will also increase by the same percentage.

Reason : In an equilateral triangle, all the sides are of equal length.

(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

(c) If Assertion is true but Reason is false.

(d) If Assertion is false but reason is true.

31. Assertion : If two sides of a right angled triangle including hypotenuse are $20\,cm$ and $16\,cm$, then the third side will be $15\,cm$.

Reason : Square of the hypotenuse of a right angle triangle is equal to the sum of the squares of the other two sides.

(a) If both Assertion and Reason are true and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are true but Reason is not the correct explanation of Assertion.

(c) If Assertion is true but Reason is false.

(d) If Assertion is false but reason is true.

32. What is the value of x in the given figure?

ANSWERS

1. C	2. A	3. B	4. B
5. C	6. C	7. B	8. B
9. B	10. C	11. A	12. C
13. B	14. B	15. C	16. D
17. D	18. B	19. C	20. C
21. B	22. C	23. D	24. C
25. C	26. C	27. D	28. D
29. A	30. D	31. D	32. 12.5